

# NATIONAL WILDLIFE REFUGE SYSTEM INVENTORY & MONITORING REGIONAL ANNUAL WORK PLAN

## MOUNTAIN-PRAIRIE REGION 6 FY 2012

### 1. Introduction

#### *1.1. Present the vision, goals, and objectives for the regional I&M Initiative.*

The new Inventory & Monitoring (I&M) program was integrated with the regional refuge biological program and together they are referred to as the Division of Biological Resources (DBR). The primary vision of the DBR is to build a biological framework that is based on management needs and to work collaboratively with partners and FWS programs to develop products that support management decisions at multiple spatial scales. In addition, the Region 6 DBR contributes to achieving National I&M Program goals and objectives. We recognize that the NWRs I&M Program is NWRs centric, but it is not refuge exclusive because collaborative efforts, when priorities and needs overlap, provides valuable information for other Service programs, LCCs, and our conservation partners. In addition, the staff recognizes that the use of an adaptive process driven by local, regional, and national needs to determine program direction is essential to ensuring long-term success and effectiveness.

#### *1.2. Describe how the regional I&M initiative is organized and planned focus areas.*

In Fiscal Year 2012, the primary goal of the DBR staff will be to complete the analysis of field station priorities and needs that were identified during station visits in FY11, and to work with field staff to accomplish high priority projects that are common across a number of stations, as well as those priority projects that are more unique to a station. An item that was immediately apparent during our station visits and communication with field staff was the need to develop Habitat Management Plans (HMPs) and Inventory and Monitoring Plans (IMPs). Information that we obtained from field station visits will be valuable in preparing meaningful HMPs and IMPs, which are step-down plans from the Comprehensive Conservation Plans (CCPs). We will work with the divisions of Refuge Planning and Water Resources, and Ecological Services division of Environmental Contaminants to evaluate, prioritize, and to gather data to prepare quality CCPs, HMPs, and IMPs. Additionally, the DBR staff will support and assist the national I&M office staff with development of guidance, protocols, databases, and various reporting needs.

#### *1.3. Briefly describe how the regional I&M Initiative integrated with the regional refuge biological program.*

See above section 1.1. General operating principles of the DBR program were developed based on existing Service policies and I&M Program guidance documents (the *Strategic Plan for Inventories and Monitoring on National Wildlife Refuges: Adapting to Environmental Change* (hereafter the *Strategic Plan*); the *Operational Blueprint for Inventories and Monitoring on National Wildlife Refuges – Adapting to Environmental Change*; *Business*

*Addendum to the Strategic Plan*). The division's primary function is to assist field stations and collaborate with other R6 programs to define clear conservation and management objectives, to provide assistance and products to achieve those objectives, as well as to evaluate progress in achieving those objectives. As stated above, we recognize the value and benefits of collaborating and leveraging resources with other FWS programs and partners; hence, we strive to work closely with those programs to achieve and contribute to large landscape scale conservation goals and objectives.

*1.4. Briefly describe how the regional I&M Initiative coordinates with the other regional FWS programs (Migratory Birds, T&E Species, Ecological Services, Fisheries, and LCCs) as well as other federal and state conservation partners. What role does the regional I&M Initiative serve within the LCC?)*

The DBR staff recognizes the values in collaborating and leveraging resources with FWS programs and conservation partners through the Landscape Conservation Cooperatives (LCCs) as well as outside of the LCCs. We will continue to collaborate with the Divisions of Water Resources and Refuge Planning, Fisheries Program, Wildlife Health, Ecological Services, Migratory Bird Office, and HAPET staff to discuss priority needs and opportunities to collaborate in inventory and monitoring projects, database development, and sharing of resources. Furthermore, the DBR staff will serve in various capacities as members of the Technical or Advisory Teams in the Southern Rockies, Great Plains, Great Northern, and Plains and Prairie Pothole LCCs. In doing so, we will attend meetings, conference calls and webinars, give presentations, review proposals, and participate in planning of various meetings as needed.

## 2. Staffing

The R6 I&M Program is operated within the R6 Division of Biological Resources. The DBR Chief provides overall guidance and support for I&M program activities in the region. Six R6 I&M positions (Table 1) were filled in FY10. The Regional I&M Coordinator is located in the regional office. Three I&M Zone Biologists are strategically located in each of Region 6's geographic areas. With the exception of a few field stations, the area of primary responsibility for each zone biologist aligns with the area supervised by R6 Zone Refuge Supervisors. Further, these areas coincide with the five LCC geographic areas in R6 (Great Northern, Great Basin, Southern Rockies, Great Plains, and Plains and Prairie Potholes). In addition, two GIS/Database Specialists serve the GIS and database needs of the program.

Table A. Positions, locations, and geographic area of responsibility for support of the U. S. Fish and Wildlife Service Mountain-Prairie Region (Region 6) Division of Biological Resources Staff (\*LCC=Landscape Conservation Cooperatives).

Position Title	Staff Name	Location	LCC*	Geographic Area
Chief, DBR	Wayne King	Lakewood, CO	Region-wide	Regional/National
Regional I&M Coordinator	Soch Lor	Lakewood, CO	Region-wide	Regional/National
Zone Biologist	Jeff Warren	Red Rock Lakes NWR	Great Northern	Utah, Montana, Wyoming, Brown's Park

		Lima, MT	Great Basin	
Zone Biologist	Cami Dixon	Chase Lake NWR, Woodworth ND	Plains & Prairie Pothole	North Dakota, South Dakota, Medicine Lake, *shared Benton Lake and Bowdoin with J. Warren
Zone Biologist	Murray Laubhan	Quivira NWR Stafford, KS	Great Plains Southern Rockies	Nebraska, Kansas, Colorado, LaCreek
GIS/Database Specialist	Jo Ann Dullum	Benton Lake NWR Great Falls, MT	Region-wide	Montana, Wyoming, Colorado, Utah (project-specific)
GIS/Database Specialist	Jennifer Zorn	Arrowwood NWR Pingree, ND	Region-wide	North Dakota, South Dakota, Kansas, Nebraska (project-specific; RLGIS)

### 3. Planned Activities and Anticipated Products

*Summarize the major planned activities and anticipated products of the initiative for the coming year in the categories below. If no activity is planned in a certain category, do not include it. Use a table format similar to the examples (Tables 1 and 2) below. Table 1 captures planned activities by Blueprint Objective; Table 2 captures planned events such as symposia, program reviews, training, and workshops. Some activities may fit into multiple categories; please report each activity only once under the most appropriate heading.*

**Table 2. Region 6 Inventory and Monitoring Activities, by Project or Theme for FY 2012.**

<b>Table 1. Region 6 Annual Work Plan for Inventory and Monitoring Program - FY2012.</b>				
<b>Blueprint Objectives and Tasks</b>	<b>Project or Theme; Status and Accomplishments</b>	<b>Tasks</b>	<b>Expected Product</b>	<b>I&amp;M Staff</b>
	<b>REGIONAL I&amp;M PRIORITIES</b>			
	Habitat Management Plans (HMPs)	Complete HMPs for Kulm WMD, Fish Springs, Rocky Mountain Arsenal, Flint Hills, LaCreek, Marais de Cygnes	Habitat Management Plans	Zone biologists, database managers, and I&M coordinators
	Inventory and Monitoring Plans (IMPs)	Complete IMPs for Kulm and Fish Springs; develop draft IMPs simultaneously with HMPs.	Inventory and Monitoring Plans, following guidelines in draft I&M Policy.	Zone biologists and I&M coordinator
	Comprehensive Conservation Plans	Assist Planning Div. and station staff with preparation of CCPs for Benton Lake, Lake Andes, San Luis Valley Complex, Quivara, Cokevill Meadows, Charles M. Russell, Ouray.	Comprehensive Conservation Plans	Cami Dixon, Murray Laubhan, Jeff Warren
<b>1b</b>	Hydrogeomorphic assessment	Assist Planning Div. and contractor with HGM assessment on Quivira, Baca, Monte Vista, Alamosa, and Tewaukon, National Bison Range Complex	Hydrogeomorphic reports	Murray Laubhan Wayne king

	I&M Review/Station Visits	<ul style="list-style-type: none"> <li>• Enter info. gathered from station visits into the PRIMR database and validate the information with field staff.</li> <li>• Evaluate station priorities and needs to inform regional and national offices work plan.</li> <li>• Complete Part I of the draft I&amp;M Policy.</li> </ul>		I&M Staff
	<b>ABIOTIC AND BIOTIC INVENTORIES</b>			
1e	Vegetation coverytype mapping on field stations	Assist field stations with conducting veg. mapping using sound protocols.	vegetation cover maps	Jen and Jo Ann
1e	LiDar	Assist field stations with LiDar mapping assessment - what has been done and not and follow-up work to get these completed for field stations.	LiDar	Jo Ann
	<b>Water</b>			
1b	Water Resources Inventory and Assessment (WRIA)	Work with R6 Water Resources Division and Natural Resources Program Center Water Resources Branch to conduct WRIAs on field stations.	Water resources inventory and assessment on field stations to inform HGM, CCP, and HMP development and other station management decisions.	DBR, Planning, ES, and WRD staff

2a	Evaluate and prioritize water resources information need on field stations.	<ul style="list-style-type: none"> <li>• Collaborate with the regional divisions of Water Resources, Refuge Planning, and Ecological Services (EC program) to conduct evaluation of field station information needs in regards to water inventory, assessment, and quality (contaminants).</li> <li>• From the evaluation process, prioritize refuges to have water inventory and assessment and HGM assessment conducted and work with the Refuge Planning division on developing the second round of CCP development.</li> </ul>	<ul style="list-style-type: none"> <li>• Ranked list, based on cross-program evaluation of station needs in regards to WRIA, Contaminants, HGM, and CCP evaluation and development.</li> <li>• A schedule for field stations for WRIA (including contaminants), HGM, and CCP development.</li> </ul>	DBR, Planning, ES, and WRD staff
1b	Hydrogeomorphic (HGM) working group	<ul style="list-style-type: none"> <li>• Assess status of HGM utilization and evaluate needs and ranking method for funding HGM analysis;</li> <li>• Develop standards for HGM characterization, data, and report format across regional and national programs and divisions (Refuge, Planning, WRD).</li> <li>• Work with contractor to educate staff at all levels about the HGM process, interpretation, and application for management decisions.</li> </ul>	<ul style="list-style-type: none"> <li>• Ranked list of field stations for HGM assessment;</li> <li>• Standardized HGM process and report, when appropriate;</li> <li>• Staff who are well-informed of all aspects of HGM analysis.</li> </ul>	DBR
<b>Legacy data</b>				

1c	Develop GRAS database and protocol.	Work with regional and national staff to refine Geospatial Referenced Archival System (GRAS) pilot effort and on guidance of the operational phase of capturing legacy data on field stations	<ul style="list-style-type: none"> <li>• Guidance or protocol document</li> <li>• Database (GRAS) where field station legacy data are stored and can be retrieved from one centralized database, to be used for purposes of HGM and CCP development, among other management planning and decision making.</li> </ul>	DBR staff and Mike Artmann (Refuge Planning)
1a	Populate GRAS database with a subset of field station data.	Assess which refuge would be appropriate to use GRAS, based on HGM and CCP schedules and work with the national office and field staff to populate GRAS.	Legacy data captured in GRAS and used for HGM and CCP development.	I&M Staff
<b>ADAPTIVE MANAGEMENT</b>				
1f	Native Prairie Adaptive Management Project	<ul style="list-style-type: none"> <li>• Continue to coordinate the project in the operational phase.</li> <li>• Continue to provide support for database and decision support tool.</li> <li>• Manage funds from PPP LCC</li> <li>• Prepare progress report for the PPP LCC</li> <li>• Continue to coordinate associated directed research, including grassland bird study (Larry Igl), Kentucky bluegrass study (NDSU)</li> </ul>	<ul style="list-style-type: none"> <li>• Data and information to inform management decisions.</li> <li>• Database and decision support tool.</li> <li>• Progress reports</li> </ul>	Cami, Jennifer, Justin Dupey, Soch

	Collaborate with North Dakota State University, University of North Dakota, South Dakota State University to assist with research and data analysis on grassland habitats.	Work with NDSU, UND, and SDSU staff to conduct 2 projects on invasive grasses funded by DBR in FY11.	<ul style="list-style-type: none"> <li>• Data and information valuable for management decision making.</li> <li>• Study report</li> </ul>	Cami
1f	Reed Canary Grass Adaptive Management Project	<ul style="list-style-type: none"> <li>• Continue to support the project as needed.</li> <li>• Work with project science team to ensure smooth transition from set-up phase to transitional phase</li> </ul>	<ul style="list-style-type: none"> <li>• Data and information valuable for management decision making.</li> <li>• Study report</li> </ul>	Rachel Laubhan, Soch
1f	Cattail control multi-station study	<ul style="list-style-type: none"> <li>• Work with Dr. Robert Gleason and Brian Tangen (Northern Prairie WRC) to finalize the study report;</li> <li>• Organize and conduct the hand-off meeting and coordinate next phase with cooperators as needed.</li> </ul>	<ul style="list-style-type: none"> <li>• Data and information valuable for management decision making.</li> <li>• Study report</li> </ul>	Murray, Soch
1f	Prairie Reconstruction Adaptive Management Project	<ul style="list-style-type: none"> <li>• Continue to coordinate the project; add additional cooperators and sites as interest and time permits.</li> <li>• Work with NDSU, UND, SDSU staff to collect and analyze data and report out results.</li> </ul>	<ul style="list-style-type: none"> <li>• Data and information valuable for management decision making.</li> <li>• Study report</li> </ul>	Cami, Soch (as needed)
1f	Refuge Habitat Management Actions Database (RHMD)	<ul style="list-style-type: none"> <li>• Compare RHMD with RLGIS and adopt any useful components from RHMAD to incorporate into RLGIS.</li> <li>• Evaluate RHMD for potential Annual Habitat Work Plan database for field stations.</li> </ul>	Database (s)	Database managers
<b>FIRE</b>				



2b	North Dakota Range Research Pipeline	Continue work with ND Range Research Pipeline to coordinate efforts on grassland management	Protocol/report	Cami
<b>STRESSORS: INVASIVE SPECIES</b>				
3a	Regional invasive species of high priority	<ul style="list-style-type: none"> <li>• Collaborate with Regional Invasive Species coordinator to address management issues of high priority on field stations, such as setting thresholds to make management decisions.</li> <li>• Work with the Regional Invasive Species program to leverage resources to support NPAM, potentially.</li> </ul>	<ul style="list-style-type: none"> <li>• Information and data needed to improve management decisions.</li> <li>• Monitoring protocols</li> <li>• Databases, if needed.</li> </ul>	I&M Staff
3a	Invasive species vegetation mapping	Continue to assist Regional Invasive Species coordinator with mapping weeds on several field stations.	maps of invasive spp.	Jo Ann and Jen
3a	National Invasive Species pilot project	Participate and assist the Regional and National Invasive Species programs with the pilot effort to develop predictive models for invasive species occurrence.	Predictive models to inform management of invasive species	DBR staff
<b>WILDLIFE HEALTH</b>				
3b	Wildlife Health program	Continue to work with Tom Roffe to integrate wildlife health monitoring with I&M program.	Wildlife health inventory and monitoring on field stations	Wayne
<b>BIRD MONITORING</b>				

4c	Grassland bird conservation at multiple landscape scales	Continue to work with team of partners from various agencies and NGOs to refine the framework for grassland bird conservation at multiple landscape scales, spanning across breeding, migration, and wintering grounds.	Draft framework for grassland bird conservation with partners	Soch
4c	National bird monitoring working group	Continue to serve on national Bird Monitoring team to assess status of bird monitoring on field stations, across regions, and develop protocols to implement a nationally coordinated bird monitoring program.	Monitoring program and protocols	Soch
4c	Marsh Bird Monitoring Program	Marsh bird monitoring and database: support database development (Patuxent) and monitoring efforts on field stations; provide suggestions and comments on monitoring questions and issues related to the National Marsh Bird Monitoring Framework and Database.	Database and monitoring program	Soch
<b>DATABASE</b>				
7	SharePoint sites	Maintain and update SharePoint sites for regional I&M program and for the DBR staff and a site for general access by field staff and other programs	Website	Jen
7	RLGIS	RLGIS: support field stations with installation and assist with training on how to use	database	Jen and Jo Ann

7	Project and Budget Tracking Database	<ul style="list-style-type: none"> <li>• Complete the database for R6 use</li> <li>• Work with other regions to modify the database for cross-regional use</li> <li>• Work with other regional database managers and the national database managers to develop script for uploading needed information into the national database IMAT.</li> </ul>	Database	Jen and Jo Ann
7	RFP (Request for Proposal) database	Maintain and update the RFP database; develop the reporting module.	Database	Jo Ann and Murray
7	PRIMR database	Continue to serve on team for development of database, user guide, and populate the database with station I&M info.	Database	Jen and Jo Ann
7	GRAS	Continue to work with NRPC (national) office to develop the operational phase of uploading legacy data into GRAS.	Database	Jo Ann and Soch
7	EnVi and Ecognition veg. classification software	Compare and test usage and application at our field stations	Database	Jo Ann
7	Databases for field stations	Continue to work with field station staff to develop databases for biological inventory and monitoring projects as needed	Databases	DBR staff
<b>LANDSCAPE CONSERVATION COOPERATIVES (LCCs)</b>				

	Engage and communicate with LCCs	Continue to serve on Advisory and Technical Teams in all the LCCs in Region 6	engagement and communication with other partners and programs	DBR staff
	Manage funds received from PPP LCC for Native Prairie and Reed Canary Grass AM projects	Manage funds and prepare and submit progress report	decision support tools	Soch
	Cross-program conservation priorities and science needs framework.	Continue to coordinate team to developing a decision framework and communications structure to identify conservation priorities and science needs across FWS programs and for delivery to LCCs	Framework/guidance	Soch
	Grassland bird conservation at multiple landscape scales	Continue to work with team of partners from various agencies and NGOs to refine the framework for grassland bird conservation at multiple landscape scales, spanning across breeding, migration, and wintering grounds.	Framework/guidance	Soch
	<b>COMMUNICATION-TRAINING</b>			
	Engage and communicate with field staff	<ul style="list-style-type: none"> <li>• Distribute Regional Annual Work Plan to field staff, including the HAPET office, to obtain comments and suggestions and to engage with setting regional biological priorities.</li> <li>• Conduct webinars (3x/year) to provide updates and receive feedback to field staff.</li> </ul>		

	Conduct workshops	<ul style="list-style-type: none"> <li>• Conduct Basic Vegetation Monitoring Sessions</li> <li>• Conduct training sessions for Native Prairie Adaptive Management Project Monitoring Training sessions</li> <li>• Conduct Grazing and Wildlife Workshop</li> <li>• Conduct Prairie Reconstruction Workshop for regions 3 and 6.</li> <li>• Conduct training on pollinators</li> </ul>	Information sharing and collaboration	
	Instruct NCTC courses	<ul style="list-style-type: none"> <li>• Instruct "Biological Fundamentals" course</li> <li>• Instruct "Designing and Implementing a Monitoring Program"</li> <li>• Instruct "Introduction to Structured Decision Making"</li> </ul>	Course instruction	Cami and Soch
	<b>OTHER PARTNERSHIPS</b>			
	Collaboration with other partners	<ul style="list-style-type: none"> <li>• Continue to work with the Director of Northern Prairie Wildlife Research Center to develop research needs that will benefit refuges.</li> <li>• Continue to collaborate with the Director of the Fort Collins Science Center and staff to develop research needs that would benefit refuges.</li> </ul>	Collaboration	Murray
	Station Reviews	Participate in 2-3 station reviews	Station Reviews	DBR staff

	Ecological Society of America Emerging Issues in Ecology conference.	Serve on planning committee for the Ecological Society of America's Emerging Issues in Ecology Conference entitled "Developing Ecologically-Based Conservation Targets Under Global Change" to be held at NCTC, March 2012.	Conference/report	Soch
	Wetland Monitoring protocol	Continue to collaborate with USGS staff on submergent aquatic vegetation (SAV) analysis and sample design with the ultimate goal of having a workable monitoring protocol for refuges interested in SAV monitoring.	Protocol	Jeff

### 3. Budget Narrative and Budget

3.1. *Provide a brief description of how the I&M funding was spent during the previous FY, including the major work activities presented in Section 4. List the major planned expenditures of I&M funds, including staff salaries and operations, contracts and agreements.*

At the time of writing this report, we are operating under a Continuing Resolution. We expect FY12 level of funding to be the same or similar to FY11, which was \$1.9 million in Region 6.

### 4. Appendix

4.1. *Map of NWRS stations in the Mountain-Prairie Region (6), by state and LCC.*

